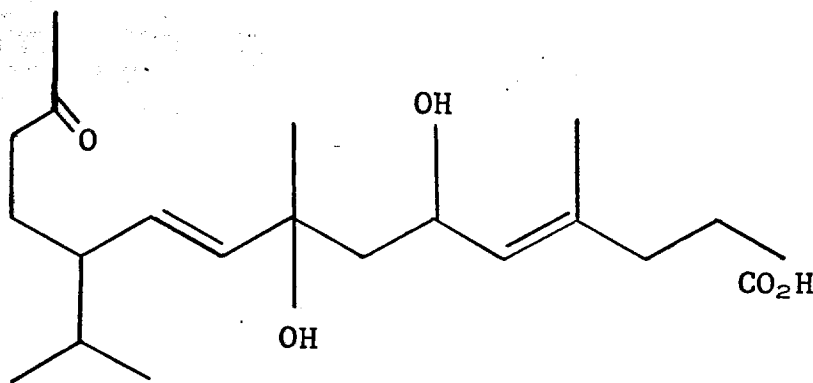


STRUCTURE OF TWO SOLANONE PRE-
CURSORS FROM TOBACCO.

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ABSTRACT

Two carboxylic acid precursors of solanone (2-methyl-5-isopropyl-1, 3-nonadien-8-one) have been isolated from a chloroform extract of burley tobacco using preparative TLC of the methyl esters for final purification. Both precursors give solanone in 7.5% weight yield on gas chromatography assay. The methyl esters of both precursors give (1) methyl levulinate and 2-isopropyl-5-keto-hexanal on ozonolysis in the presence of tetracyanoethylene, (2) a single saturated keto ester with mass 340 on forced hydrogenation (methyl 4, 8-dimethyl-11-isopropyl-14-keto-pentadecanoate), and (3) α , β -unsaturated ketones from chromium trioxide-pyridine oxidation which undergo reverse aldolization to form norsolanadione (5-isopropyl-3-nonene-2,8-dione) and 4-methyl-6-ketoheptanoic acid. Further structural data on the precursors from the infrared and NMR spectra, and their thermal decomposition to give solanone allows only diastereoisomers of 4,8-dimethyl-6,8-dihydroxy-11-isopropyl-14-keto-4,9-pentadecadienoic acid (Structure I) as possible structures.



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